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WILDFLOWERS FOR THE MID-ATLANTIC:
LANCE-LEAVED TICKSEED (*Coreopsis lanceolata*)

Prepared by: Jennifer L. Kujawski, *Resource Conservationist*, John M. Englert, *Horticulturist*, and Hugh Hayward, *Greenhouse Manager*

INTRODUCTION

Lance-leaved tickseed, *Coreopsis lanceolata*, is a native perennial wildflower, ranging in the Eastern United States from Michigan south to Florida (Gleason and Cronquist, 1963). A common prairie inhabitant (Art, 1986; Jones and Foote, 1990; Phillips, 1985), it is most frequently found in areas with dry, sandy soil. The plant has a loose, open form and grows to a height of 1 to 3 feet (Art, 1986). Dark green narrow lance-shaped leaves are numerous at the base of the plant and decrease in number along the stems. Two-inch wavy-margined composite flower heads appear on the plant from May to August in Maryland (Brown and Brown, 1984). Both ray and disc flowers are bright yellow, and flower heads usually occur singly atop long peduncles. Seeds are 1/8 inch long, black, with small papery wings; they resemble ticks, giving rise to the plant's common name (Art, 1986).

USES

Because it is drought tolerant, tickseed is an ideal candidate for meadow and roadside plantings; massing plants gives the best color effect. The National Plant Materials Center (NPMC) produces lance-leaved tickseed seed and plugs for revegetation plantings within Cumberland Gap National Historical Park (NHP). In home perennial gardens, it may be grown for cut flowers, placed in a perennial border, or used for naturalizing an area (Art, 1986; Jones and Foote, 1990; Phillips, 1985; Wildseed, 1997).

SUITABLE SITES

Tickseed grows naturally in full sun on well-drained sites with sandy soil, but can tolerate light shade and a variety of soil types (Wildseed, 1997; Wilson, 1992). The NPMC maintains a production field on sandy loam soil in full sun. Lance-leaved tickseed has done very well on Cumberland Gap NHP revegetation sites on rocky, shaly, or barren soils when planted as seed or plugs.

SEED COLLECTION AND AVAILABILITY

Available from mail-order native plant nurseries, seeds can also be collected from wild populations. Seeds ripen 1 to 3 weeks after flowering (Phillips, 1985), though seed heads do not mature uniformly. The NPMC has collected mature seeds from native stands in eastern Kentucky in mid-September. Seeds can be shaken from the heads into a bag.

In the NPMC production field, seeds ripen from mid-July to mid-August and heads are harvested using a combine. After drying, seeds and chaff are separated in a table top 2-screen clipper. The cleaned seeds are stored dry in cloth bags at 35°F. Seeds stored under ideal conditions remain viable for several years.

ESTABLISHMENT AND MAINTENANCE

The NPMC has used seedling transplants as a means of establishing tickseed in a production field and at revegetation sites. Seeds may be sown either in 392-cell trays (TLC Polyform Inc., Minneapolis, MN) for transplanting to plug trays, or directly into plug trays. For seeding directly into plug trays, covering seed lightly with germination mix provides more uniform germination. A pregermination cold treatment is not needed. Germination generally occurs 1 to 2 weeks after sowing (up to 6 weeks for older seed). After 3 weeks of growth, seedlings in 392-cell trays are transplanted into plug trays for transplanting into production fields or at revegetation sites. The NPMC uses a commercial peat : perlite mix and a time-release fertilizer in all seedling trays. A soluble fertilizer (20-18-18) is applied twice a week to young plants in the greenhouse. Seedling plugs are ready for the field in approximately 8 weeks. The NPMC has successfully planted plugs directly in the ground in both spring and fall; plants may flower sporadically the first growing season. Plugs of tickseed establish well on low-fertility soils and very difficult sites.

Tickseed has also been successfully direct-sown (Jones and Foote, 1990). Seeds may be sown in the fall or spring at a depth of 1/16 inch; the recommended seeding rate is 10 pounds per acre (Wildseed, 1997). Lance-leaved tickseed seed may be hand broadcast or hydroseeded with good results. On ideal planting sites, lance-leaved tickseed will take over if seeded too heavily.

Maintaining the production field of tickseed at the NPMC entails hoeing around plants to reduce weeds or planting a cover crop (e.g. hard fescue or red fescue) between rows when plugs are transplanted. The pre-emergent herbicide trifluralin (tradename: Treflan, produced by DowElanco, Indianapolis, IN) is used after hoeing to prevent weed seed germination. Plantings at revegetation sites have a better chance of survival if a non-selective contact herbicide, e.g. glyphosate (tradename: Roundup, produced by Monsanto, St. Louis, MO), is applied at least 10 days prior to transplanting plugs to remove any aggressive species (e.g. tall fescue, clover, or crown vetch).

SEED PRODUCTION

A 0.9 acre seed production field of tickseed established from plugs at the NPMC in spring 1991 produced 14.2 pounds of seed the following year. In 1996, the same field yielded 7.8 pounds of seed. Based on our experience at the NPMC, the productivity of seed production fields of lance-leaved tickseed decreases 3 to 4 years after initial planting. In addition, parent plants usually die out and are replaced by new seedlings generated from fallen seed. Long-term seed production of lance-leaved tickseed may require replanting the stand or careful management of weeds and soil fertility. The average number of seeds per pound is 221,000 (Wildseed, 1997).

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